CP-1130F
SERIAL NO. 3091

ONKYO® SERVICE MANUAL

DIRECT DRIVE FULLY AUTOMATIC TURNTABLE

MODEL CP-1130F

ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Type:	Direct drive fully automatic turntable auto lead-in and return; reject, repeat, search and cue by button function; two motor micro-computer design.
Turntable platter:	310 mm (12-1/4") aluminum die-cast, 1.2 kg (2.6 lbs.) (with platter mat)
Motor:	Electronic servo direct drive brushless DC motor
Speeds:	33-1/3, 45 rpm, adjustable ±3%
Wow & Flutter:	less than 0.025% (WRMS)
Signal-to-Noise Ratio:	better than 72 dB (DIN B)
Tonearm:	Statically balanced straight type, carbon fiber/pipe construction
Effective Arm Length:	224 mm (8-7/8")
Overhang:	13 mm (1/2")
Offset Angle:	21 degrees
Maximum Tracking Error:	+3 degrees, −1 degrees
Suitable Cartridge Weight:	Min. 5, Max. 9 grams
Tracking Force:	0 – 3.0 grams
Other Features:	Tracking force direct readout scale Removable headshell Slide-type anti-skating control
Power Supply:	AC 120 V 50/60 Hz, AC 110-120/220-240 V 50/60Hz
Power Consumption:	22 Watts (Max.) 10 Watts (Normal)
Dimensions (WxDxH):	418 x 380 x 130 mm (16-1/2" x 15" x 5-1/8")
Weight:	5.6 kg (12.3 lbs.)
Accessories:	Headshell, counterweight, overhang gauge, adapter, instruction manual

Cabinet Composition

Turntable Cabinet:	Plastic
Bottom Panel:	Plastic (ABS)
Dust Cover:	Polystyrene

Optional Recommended Headshell SH-21E

Specifications are subject to change for further product improvements.

SERVICE GUIDE

1. Cautions

a The printed resistors are used on the digital circuit pc board. The surface is strong, but it is not damaged with driver etc. If it becomes necessary to replace the printed resistor for any reason, cut the printed resistor with cutter, and add the same rating solid resistor.

b Do not rotate the main motor with the unit turned upside down. If it becomes necessary to invert the unit for check purposes, remove the socket of main motor.

2. Replacing the fuse

Remove the bottom board. The fuse is located on the digital circuit PC board.

Note: For continued protection against fire hazard, replace only with same type and same rating fuse.

Part No.	Description
252046	1.5A-ST-6 (Only 120 V model)
252073	1.6A-SE-EAK (Only Universal model)

3. Voltage selector (Universal model)

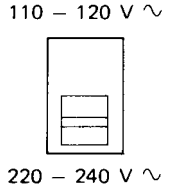
The voltage selector is located on bottom of the cabinet. If a voltage change is necessary, change the voltage selector switch to the proper voltage.

4. Precision Platter Sheet

This platter sheet is precision molded using a special type of plastic that improves platter-to-disc interface characteristics. Always handle the sheet with care to avoid scratching the mirror-finished surface.

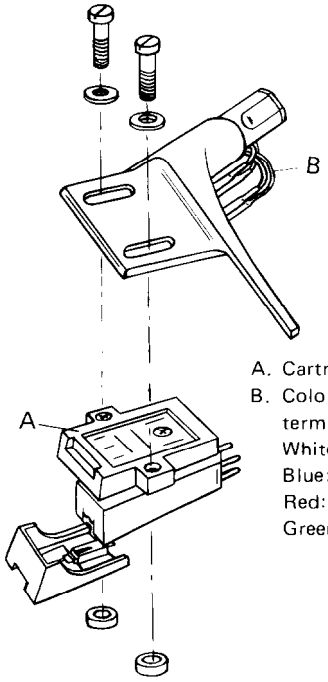
Cleaning

1. Wipe the surface with damp cotton.
2. While the surface is still damp, wipe off the surface of the sheet with a velvet record cleaning cloth using a circular could electric charges so that dust and dirt particles do not stick to the sheet. This chemical may appear on the surface of the sheet at times, but it has no effect on records. If it detracts from the appearance of the platter sheet, wipe it off using the method described above.



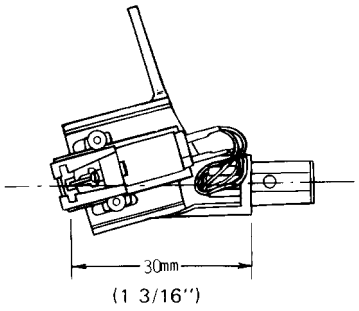
5. Attaching the cartridge

Attach the cartridge as shown below, connecting each of the color coded lead wires to the proper terminal. If a mistake is made, no sound will be heard or stereo reproduction will be lost. Also, to prevent damage to the stylus during installation operations, leave its cover on or remove the stylus completely.

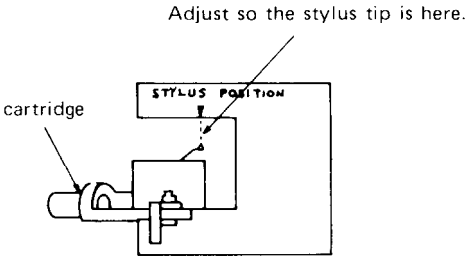


A. Cartridge
B. Colors of the headshell lead wires and cartridge terminals:
White: left channel signal (L)
Blue: left channel ground (LE or LG)
Red: right channel signal (R)
Green: right channel ground (RE or RG)

Adjust so the distance between the stylus tip and the base of the headshell is 30 mm (1 3/16") and tighten the screws. This assures the effective length and overhang of the tonearm are correct.



Use the included overhang gauge as shown below, placing the cartridge in the gauge and setting the location of the stylus tip as indicated.



After attaching a different cartridge, always balance the tonearm again and set the appropriate tracking force.

6. Search Operation

When the Search Button is depressed, the tonearm rises and slowly moves over the record toward the center stopping when the button is released. Depress the Cue Button to lower the tonearm to the record surface and start record play. If the Search Button is depressed only once, the tonearm will move to the innermost grooves of the record; if depressed once more, the tonearm will return to the outermost grooves. Use the Search Button to simplifier manual operation.

7. Remote Control

This unit is equipped with a jack so that the RC-5T remote control unit (sold separately) can be used to perform the following tuntable operations from the comfort of your listening position.

1) Play/Reject
2) Cue (UP/DOWN)
3) Search (IN/OUT)
4) Repeat

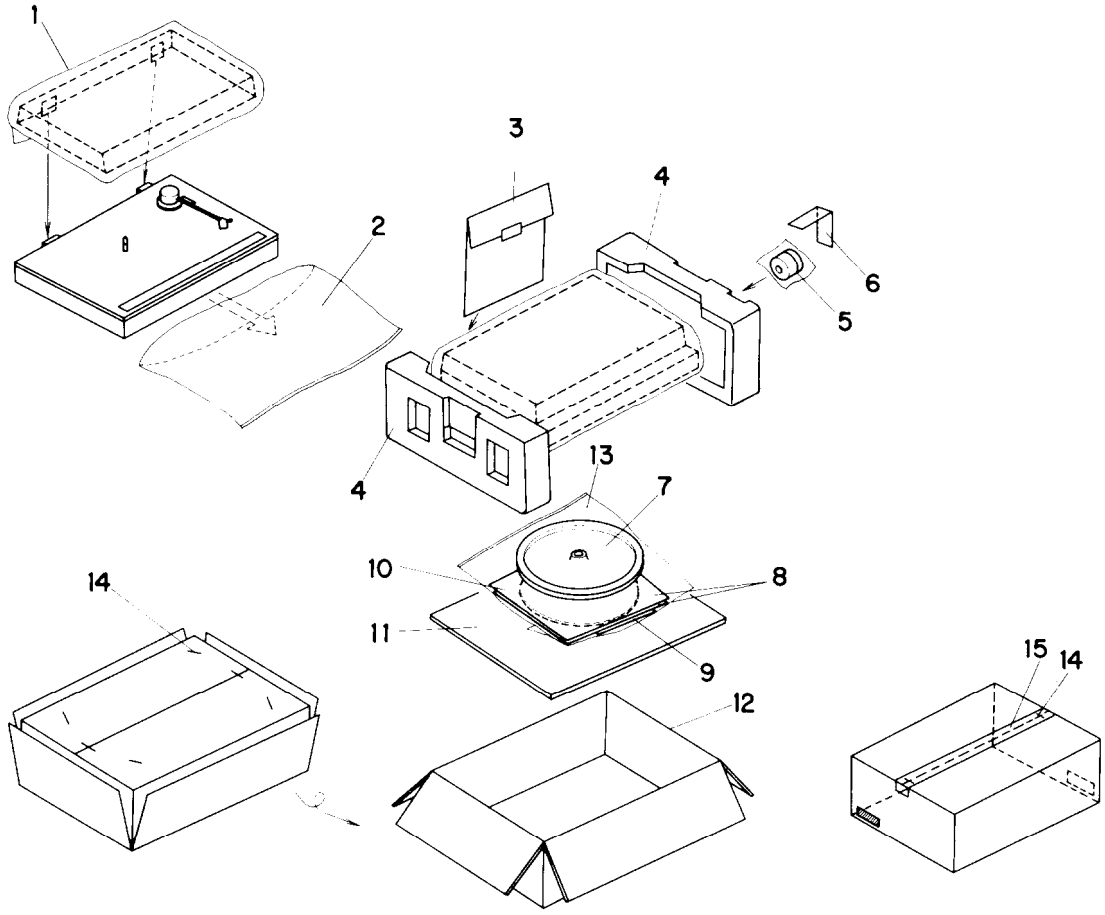
8. Memory Repeat

The memory repeat function is used to repeatedly play a record from a desired selection. Read the following instructions carefully to assure correct operation.

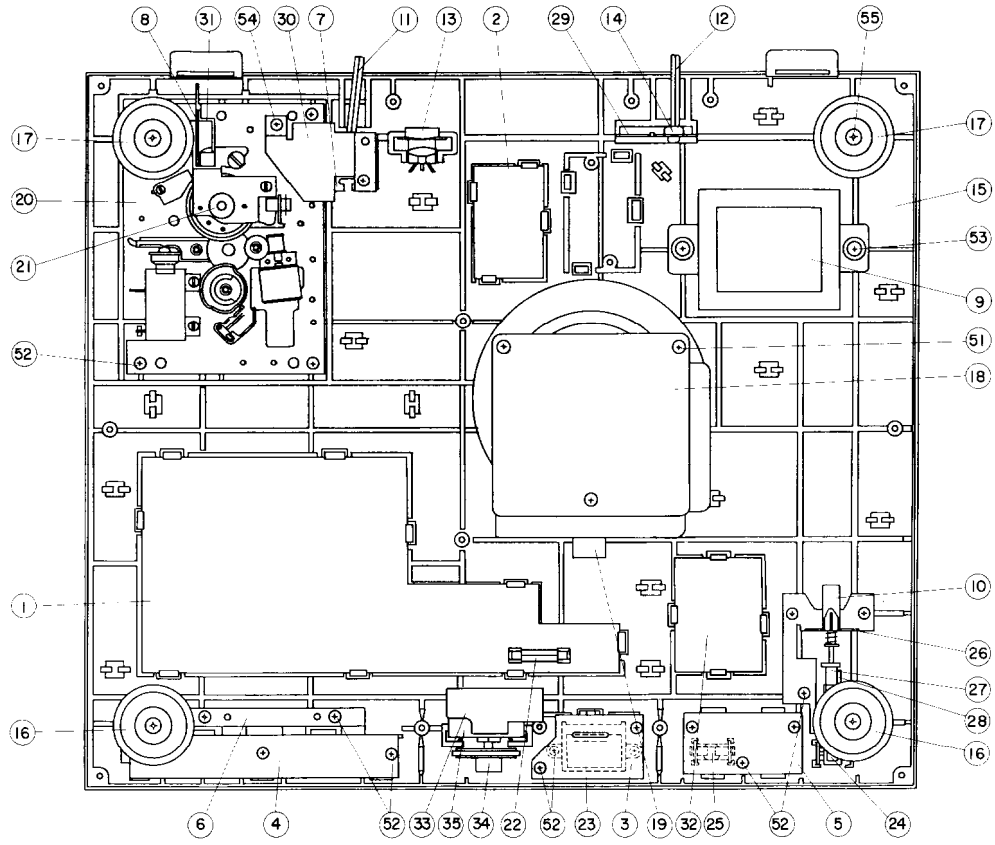
1. Start the memory repeat function only with the tonearm still in the arm rest. If memory repeat is operated during record play, the tonearm will repeatedly play the reocrd from the beginning.
2. Using the Search Button, move the tonearm until it is directly over the section where record play is to be repeated.
3. Depress the Repeat Button to the Repeat position.
4. Depress the Cue Button to lower the tonearm onto the record and memory repeat operation will begin Note that if the Cue Button is depressed before the Repeat Button, normal repeat operation (i.e., from the beginning of the record) will begin.

Note: Memory repeat can be used for any section of the reocrd from the outer edge (set by the record size selector) to the innermost grooves.

PACKING PROCEDURES



REF. NO.	PARTS NO.	DESCRIPTION
1	29100050	Protection bag
2	29100049	640x620mm, Poly bag
3	292049A	45 rpm adaptor
	24509197	Overhang gauge
	28199039	Film for T.T. sheet
	29340451	Instruction manual (120V model)
	29340452	Instruction manual (Universal model)
	29365006	Warranty card (U.S.A. model)
	29365005-3	Warranty card (Germany model)
	29358002	Service station list (U.S.A. model)
	24501330	Mounting screw for cartridge
	25055018	CV-K-1, Conversion plug (Universal model)
	29100005	220x330mm, Poly bag
4	29090536	Pad
5	24501341	Counter weight
	29100002	80x150mm, Poly bag
6	260013	50x110mm, Tape
7	24502111	Turntable platter
8	29095161	Protection sheet for T.T. mat
9	29355065	Caution sheet
10	24509231	T.T. mat
11	29090526	Pad sheet
12	29050387	Master carton box
13	29100046	370x470mm, Poly bag
14	282301	Sealing hook
15	260012	W50mm, Tape



Universal model

REF. NO.	PARTS NO.	DESCRIPTION
1	16720510C	NADG-910c, Digital circuit pc board ass'y
2	16740511A	NAPS-911a, Power supply pc board ass'y
3	16719512A	NADIS-912a, Power indicator pc board ass'y
4	16739513	NASW-913, Switch pc board ass'y
5	16719514A	NASW-914a, Switch pc board ass'y
6	16739515	NACOV-915, Cover pc board ass'y
7	16739516	NAPI-916, Tonearm terminal pc board ass'y
8	16739517	NARET-917, Return pc board ass'y
9	230400	NPT-709AG, Power transformer
10	25035191	NPS-111-L155P, Power switch
11	24505127	Output cable
12	253083	AS-CEE, Power supply cable
13	25050045	NSCT-7P14, Remote terminal
14	270280	SR-4K-4, Strainrelief
15	28110188	Cabinet
	27262066-1	Plate (R)
	27262067	Plate (L5)
16	24509216-2	Leg
17	24509216-3	Leg
18	24502110	Motor with control pc board
19	25050068	NSAS-6P036, 6P socket
20	24506450A	Mechanism ass'y
21	24501340	Tonearm

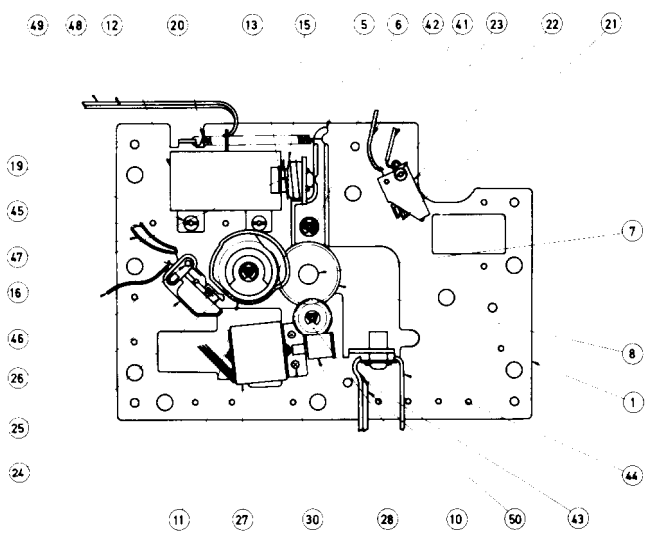
120V model

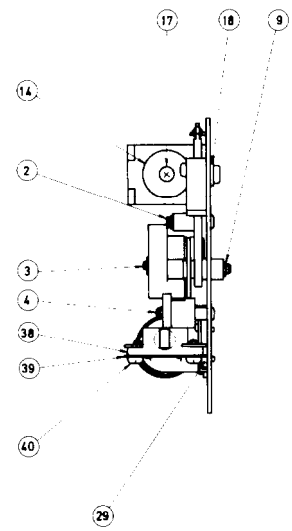
REF. NO.	PARTS NO.	DESCRIPTION
1	16719510B	NADG-910b, Digital circuit pc board ass'y
2	16739511	NAPS-911, Power supply pc board ass'y
3	16719512A	NADIS-912a, Power indicator pc board ass'y
4	16739513	NASW-913, Switch pc board ass'y
5	16719514A	NASW-914a, Switch pc board ass'y
6	16739515	NACOV-915, Cover pc board ass'y
7	16739516	NAPI-916, Tonearm terminal pc board ass'y
8	16739517	NARET-917, Return pc board ass'y
9	230399	NPT-709D, Power transformer
10	25035191	NPS-111-L155P, Power switch
11	24505127	Output cable
12	253099A	AS-UC-3, Power supply cable
13	25050045	NSCT-7P14, Remote terminal
14	270025	SR-3P-4, Strainrelief
15	28110188	Cabinet
	27262066-1	Plate (R)
	27262067	Plate (L5)
16	24509216-2	Leg
17	24509216-3	Leg
18	24502110	Motor with control pc board
19	25050068	NSAS-6P036, 6P socket
20	24506450A	Mechanism ass'y

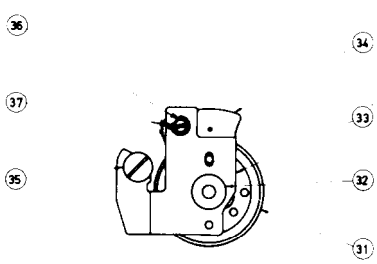
	24501321	Screw for headshell
	24501325	Headshell
	24501341	Counter weight
22	252073	1.6A-SE-EAK, AC fuse
23	28191064	Clear plate
	28133032	Back plate
24	28320447	Knob
25	28320446	Knob
26	27140409	Bracket for power
27	24504305	Cam
28	27180062	Spring
29	27140393	Bracket for power supply cable
30	27150120	Sheielded plate
31	27140411	Bracket for interruptor
32	16719519	NADIS-919, Display pc board ass'y
33	16719520	NAVR-920, Speed control pc board ass'y
34	24506402	Knob, Speed control
35	27140414	Bracket, volume
51	833140120	4TTP+12P, Tapping screw
52	834130100	3TTS+10P, Tapping screw
53	28140209	Cushion
	87614012	W4x12F, Washer
	27265035	Ring
	833142200	4TTP+20P, Tapping screw
54	834130082	3STS+8BQ, Tapping screw
55	833140120	4TTP+12P, Tapping screw
	24509215	Dust cover
	28180062	Hinge
	27170086	Bottom board
	242935	OC-201V, Cartridge
	242936	DN-201ST, Stylus

21	24501340	Tonearm
	24501321	Screw for headshell
	24501325	Headshell
	24501341	Counter weight
22	252046	1.5A ST-6, AC fuse
23	28191064	Clear plate
	28133032	Back plate
24	28320447	Knob
25	28320446	Knob
26	27140409	Bracket for power
27	24504305	Cam
28	27180062	Spring
29	27140393	Bracket for power supply cable
30	27150120	Shielded plate
31	27140411	Bracket for interruptor
32	16719519	NADIS-919, Display pc board ass'y
33	16719520	NAVR-920, Speed cotrol pc board aas'y
34	24506402	Knob, Speed control
35	27140414	Bracket, volume
51	833140120	4TTP+12P, Tapping screw
52	834130100	3TTS+10P, Tapping screw
53	28140209	Cushion
	87614012	W4 x 12F, Washer
	27265035	Ring
	833140200	4TTP+20P, Tapping screw
54	834130082	3STS+8BQ, Tapping screw
55	833140120	4TTP+12P, Tapping screw
	24509215	Dust cover
	28180062	Hinge
	27170086	Bottom board

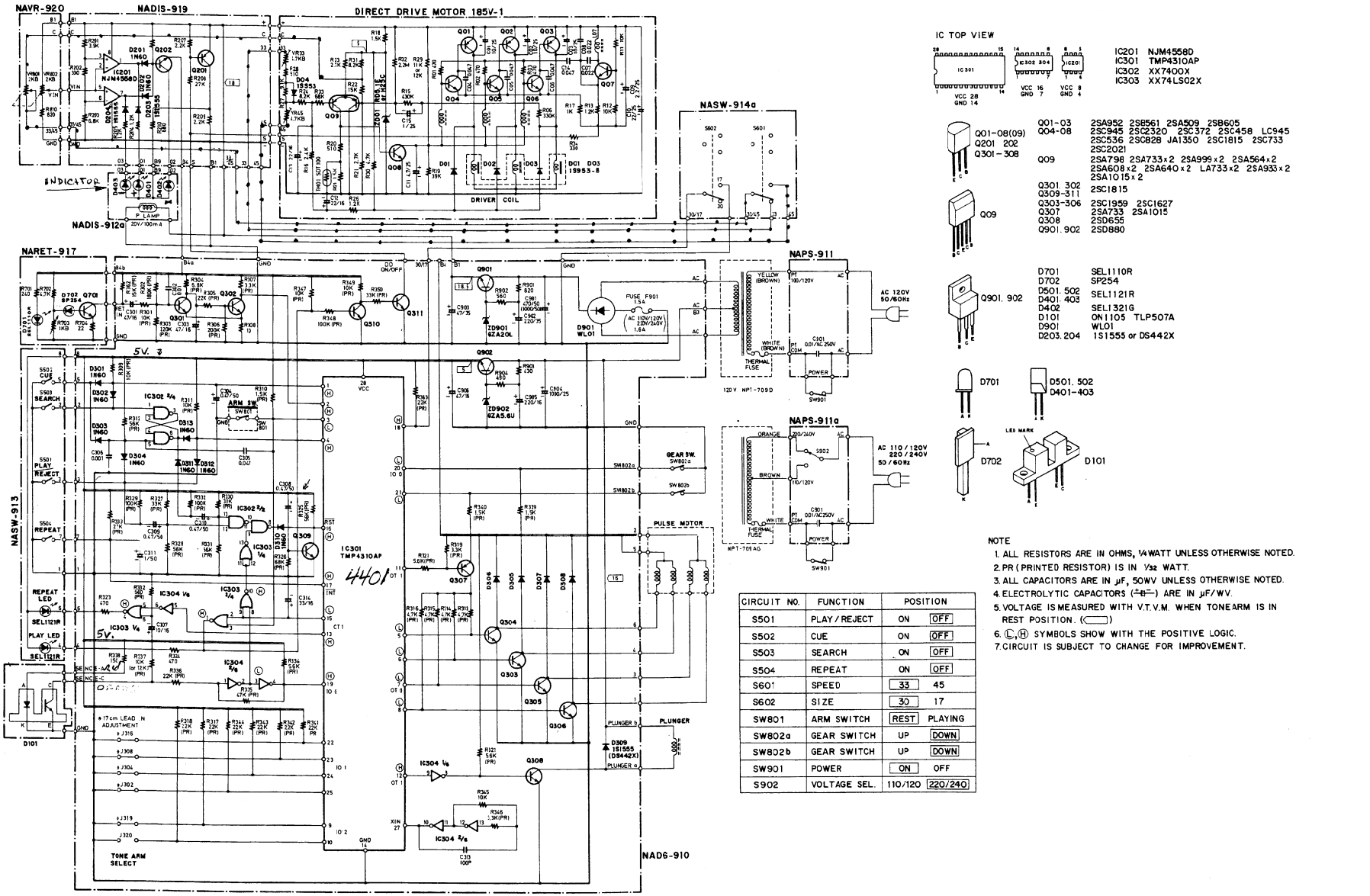
MECHANISM-COMPONENT LOCATION







REF. NO.	PARTS NO.	DESCRIPTION
1	24506452	Chassis
2		Shaft
3		Shaft
4		Shaft
5	24504304	Lever
6	893020	E-2, Circlip
7, 8	24503104	Gear ass'y
9	893030	E-3, Circlip
10	24503097	Gear
11	24503098	Cam gear
12-18	24506474	Solenoid ass'y
19	24506470	Screw
20	24503100	Spring
21	24503101	Switch
22	24506462	Cover
23		Screw
24	24503102	Switch
25	24506463	Cover
26	82112022	Screw
27, 28	24502113	Motor ass'y
29	24506464	Rubber plate
30	82152006	Machine screw
31-34	24502106	Pulley ass'y
32		Bush
33		Plate
34		Shutter
35	24506468	Eccentric pin
36	24506469	Eccentric pin
37	893030	E-3, Circlip
38-40	24506142	Interruptor ass'y
41-50		Lead wire
	24506450A	Mechanism ass'y
38-40	24506471	Interruptor



NOTE

1. ALL RESISTORS ARE IN OHMS, ¼WATT UNLESS OTHERWISE NOTED.
2. PR (PRINTED RESISTOR) IS IN 1/32 WATT.
3. ALL CAPACITORS ARE IN μF, 50WV UNLESS OTHERWISE NOTED.
4. ELECTROLYTIC CAPACITORS (+⊟−) ARE IN μF/WV.
5. VOLTAGE IS MEASURED WITH V.T.V.M. WHEN TONEARM IS IN REST POSITION. (▭)
6. Ⓛ, Ⓗ SYMBOLS SHOW WITH THE POSITIVE LOGIC.
7. CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

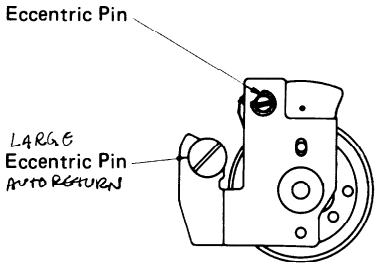
CIRCUIT NO.	FUNCTION	POSITION	
S501	PLAY / REJECT	ON	[OFF]
S502	CUE	ON	[OFF]
S503	SEARCH	ON	[OFF]
S504	REPEAT	ON	[OFF]
S601	SPEED	[33]	45
S602	SIZE	[30]	17
SW801	ARM SWITCH	[REST]	PLAYING
SW802a	GEAR SWITCH	UP	[DOWN]
SW802b	GEAR SWITCH	UP	[DOWN]
SW901	POWER	[ON]	OFF
S902	VOLTAGE SEL.	110/120	[220/240]

ADJUSTMENT PROCEDURES

1. Tonearm height

1) Remove the T.T. mat.
2) Press the record size selector to 17cm position and the power switch to the ON position.
3) Press the play/reject button.
4) As soon as the tonearm comes over the turntable platter, press the power switch to the off position.
5) Adjust the screw on the lifter plate for 14±1mm height between the stylus tip and the turntable platter.

   Note: To adjust the height for lower, turn the screw clockwise. To adjust the height for higher, turn the screw counter-clockwise.



2. Auto-return position

Adjust the return position by the large eccentric pin attached by the tonearm base. To adjust the return position for faster, turn the eccentric pin clockwise. To adjust the return position for later, turn the eccentric pin counter-clockwise.

3. Lead-in position

Adjust the lead-in position by the samll eccentric pin attached by the tonearm base. Press the record size selector to 30cm position and the speed selector to 45 r.p.m.
To adjust lead-in position for faster (outside), turn the eccentric pin clockwise. To adjust the lead-in position for later (inside), turn the eccentric pin counter-clockwise.

Press the record size selector to 17cm position and confirm the lead-in position. When outside the lead-in position, connect or cut the jumper wires by referring to the below table.

	Cut	Connect
J319	fast	late
J302	0.4 mm	
J304	0.8 mm	
J308	1.6 mm	
J316	3.2 mm	

4. PITCH CONTROL ADJUSTMENT

1) Put the stroboscope on the turntable platter.
2) Set the pitch control so that the center L.E.D. lights up.
3) Press the speed switch to 33 rpm., and adjust VR33 so that the stroboscope stripes appear to be stationary.
4) Then switch over to 45 rpm., and adjust VR45 to obtain the same stationary stroboscope condition.